

**WHAT IS CLAIMED IS:**

1. A tandem type color printer for making a printed matter according to bitmap data sets corresponding to colors, respectively, said tandem type color printer comprising:

a first memory for separately memorizing said bitmap data sets arranged in a first arrangement,

a second memory for mixedly memorizing said bitmap data sets arranged in a second arrangement different from said first arrangement,

a data controller connected to said first memory and said second memory for reading out said bitmap data sets from said first memory when a first copy of said printed matter is made, for storing said bitmap data sets read out from said first memory in said second memory in a case where a second copy of said printed matter is made, and for reading out said bitmap data sets from said second memory when said second copy of said printed matter is made.

2. A tandem type color printer claimed in Claim 1, each of said bitmap data sets consisting of data lines, wherein said second arrangement is that each of said bitmap data sets are divided into a plurality of data units each of which includes a predetermined number of said data lines, and that said data units of said bitmap data sets are arranged on the basis of predetermined output order regardless of said colors.

3. A tandem type color printer for making a printed matter according to bitmap data sets corresponding to colors, respectively, each of said bitmap data sets consisting of a plurality of data lines, said tandem type color printer comprising:

a first memory for separately memorizing said bitmap data sets,  
a data controller connected to said first memory for reading out  
said bitmap data sets from said first memory line by line in  
predetermined output order when a first copy of said printed matter is  
made, and

a second memory connected to said data controller for  
memorizing said bitmap data sets supplied from said data controller so  
that each of said bitmap data sets is divided into a plurality of data units  
each of which has a predetermined size and that said data units of said  
bitmap data sets are arranged on the basis of said predetermined  
output order regardless of said colors,

wherein said data controller reads out said bitmap data sets  
from said second memory line by line in said predetermined output  
order when a second copy of said printed matter is made.

4. A tandem type color printer as claimed in Claim 3, wherein  
said data controller reads out one of said data lines of the bitmap data  
sets in response to a horizontal synchronized signal.

5. A tandem type color printer as claimed in Claim 4, said  
horizontal synchronized signal corresponding to one of said colors,  
wherein said data controller reads out said data line from said bitmap  
data set corresponding to the color.

6. A tandem type color printer as claimed in Claim 3, wherein  
the predetermined size is larger than that of a predetermined number of  
said data lines.

7. A tandem type color printer as claimed in Claim 3, wherein  
each of said data units is located in a bank.

8. A tandem type color printer as claimed in Claim 3, wherein  
said data controller supplies said bitmap data sets to said second  
memory only when it judges that said second copy of said printed

matter is made.

9. A tandem type color printer as claimed in Claim 3, wherein said data controller has a compression/expansion circuit which compresses said bitmap data sets to store compressed bitmap data sets in said second memory and which expands said compressed bitmap data sets read out from said second memory.

10. A method of outputting bitmap data sets corresponding to colors, respectively, in a tandem type color printer, comprising the steps of:

reading out, by the use of a data controller, said bitmap data sets from a first memory separately memorizing said bitmap data sets when a first copy of a printed matter is made,

outputting, from said data controller, said bitmap data sets to make said first copy of said printed matter,

storing said bitmap data sets from said data controller in a second memory with changing arrangement of said bitmap data sets,

reading out, by the use of said data controller, said bitmap data sets from said second memory when a second copy of said printed matter is made, and

outputting, from said data controller, said bitmap data sets to make said second copy of said printed matter.

11. A method of outputting bitmap data sets corresponding to colors, respectively, in a tandem type color printer, each of said bitmap data sets consisting of data lines, comprising the steps of:

receiving, at a data controller, a horizontal synchronized signal, judging, at said data controller, which color does said horizontal synchronized signal corresponds to,

judging, at said data controller, whether said horizontal synchronized signal is for a first copy of a printed matter,

reading out, by the use of said data controller, one data line of said bitmap data set corresponding to the color judged by said data controller from a first memory separately memorizing said bitmap data sets to output said data line when said data controller judges that said horizontal synchronized signal is for said first copy of said printed matter,

judging, at said data controller, whether a second copy of said printed matter is made or not,

judging, at said data controller, whether said data line can be stored in a present memorizing area of a second memory or not when said data controller judges that said second copy of said printed matter is made, said present memorizing area having a predetermined size and memorizing the preceding data line corresponding to the color,

storing said data line in said present memorizing area when said data controller judges that said data line can be stored in said present memorizing area,

storing said data line in another memorizing area having an address larger than that of said present memorizing area when said data controller judges that said data line can not be stored in said present memorizing area, and

reading out, by the use of said data controller, said data line from said second memory to output said data line when said data controller judges that said horizontal synchronized signal is not for said first copy of said printed matter.